

An On-Line Neural Network-Based Harmonic Analyzer

Zrida, J. Bakhashwain, J. El-Amin, I.;Dept. of Electr. Eng., King Fahd Univ. of
Pet.Miner., Dhahran;

**Circuits and Systems, 1994., Proceedings of the 37th Midwest Symposium
on;Publication Date: 3-5 Aug 1994;Vol: 1,On page(s): 622-625 vol.1;ISBN: 0-7803-
2428-5**

King Fahd University of Petroleum & Minerals

<http://www.kfupm.edu.sa>

Summary

This paper introduces a simple solution, based on neural networks, to the problem of the on-line and adaptive harmonic component analysis in power systems. A single neuron is used whose synaptic weights are directly related to the signal's dc component and to the magnitudes and phases of the harmonic components present in the signal. In addition, deviation from the nominal fundamental frequency is accounted for in the same context. The simulation of a realistic test case shows a very efficient and precise estimation of the present harmonics

For pre-prints please write to:abstracts@kfupm.edu.sa